

# Probability Practice Test

Name: \_\_\_\_\_  
Date: \_\_\_\_\_

1. There are 15 M&M's in a dish: 4 yellow, 3 green, 5 brown, 2 red, and 1 orange.
  - a.  $P(\text{yellow}) =$  \_\_\_\_\_
  - b.  $P(\text{red}) =$  \_\_\_\_\_
  - c.  $P(\text{orange}) =$  \_\_\_\_\_
  - d.  $P(\text{green}) =$  \_\_\_\_\_
  - e.  $P(\text{brown}) =$  \_\_\_\_\_
  - f.  $P(\text{blue}) =$  \_\_\_\_\_
2. If you roll a die, find the following probabilities:
  - a.  $P(3) =$  \_\_\_\_\_
  - b.  $P(4) =$  \_\_\_\_\_
  - c.  $P(1) =$  \_\_\_\_\_
  - d.  $P(\text{even } \#) =$  \_\_\_\_\_
  - e.  $P(7) =$  \_\_\_\_\_
  - f.  $P(\text{odd } \#) =$  \_\_\_\_\_
3. Using the twelve months of the year, find:
  - a.  $P(\text{month ends in 'ber'}) =$  \_\_\_\_\_
  - b.  $P(\text{month begins with 'J'}) =$  \_\_\_\_\_
  - c.  $P(\text{month has four letters}) =$  \_\_\_\_\_
  - d.  $P(\text{month begins with 'W'}) =$  \_\_\_\_\_

Find the number of possible outcomes for the following.



4. rolling a die \_\_\_\_\_
5. spinning the spinner to the right \_\_\_\_\_
6. tossing a coin \_\_\_\_\_
7. rolling a die then tossing a coin \_\_\_\_\_
8. There are 3 different types of TV's, 4 different types of DVD players and 10 different types of remotes. How many different combinations can you make? \_\_\_\_\_
9. There are 4 main meals, 6 desserts, and 8 veggies available. How many different meals can you make? \_\_\_\_\_
10. Draw a tree diagram of flipping a coin, then rolling a die.

Find the probability of the following. Assume you are taking out one marble at a time.

There are 7 green marbles, 5 red, and 2 yellow, and 1 blue.

With replacement      Without Replacement

11.  $P(R \text{ and } B)$  \_\_\_\_\_
12. \_\_\_\_\_
13.  $P(B \text{ and } B)$  \_\_\_\_\_
14. \_\_\_\_\_
15.  $P(Y \text{ or } G)$  \_\_\_\_\_
16. \_\_\_\_\_
17.  $P(Y \text{ and } Y)$  \_\_\_\_\_
18. \_\_\_\_\_

**Evaluate the following.**

19.  ${}_6P_3 =$  \_\_\_\_\_ 20.  ${}_5C_4 =$  \_\_\_\_\_ 21.  $5! =$  \_\_\_\_\_

**Decide whether the following is a combination or permutation, then solve.**

22. How many ways are there to choose 7 out of 12 players? \_\_\_\_\_
23. In how many ways can 6 people stand in line to get pizza? \_\_\_\_\_
24. I have a combination lock. It needs 3 numbers to open it. There are 20 numbers to choose from, and no two numbers can be the same. How many possibilities are there?
25. We are going to an amusement park. There are ten rides to choose from. In how many different orders can we ride 4 of them?
26. You need to do 5 of 7 chores. How many different groups of 5 chores can be done?

**Predict the number of times the event will occur if the experiment is performed 400 times.**

27. Toss a coin and get a head.
28. Spin a spinner with the 12 months marked and get a month that starts with a "J".
29. Toss two dice and get two 4's.